

The Kiss That Keeps on Giving

Herpesviruses are highly contagious through contact with saliva and other secretions; there is no cure and some can recur. Can you identify these viral exanthems?

Match the diagnosis to the photo by letter

- a. Herpes simplex virus 1 (cold sore)
- b. Epstein-Barr virus (mononucleosis)
- c. Herpesvirus 6 (roseola infantum)
- d. Varicella-zoster virus (chickenpox)



1. A 25-year-old white man presents to urgent care with a 9-day history of increasing sinus pressure, mild sore throat, dry cough, and low-grade fever. Sinus pain (and symptom duration) is the primary complaint. A 5-day course of amoxicillin-clavulanate is prescribed for a presumed diagnosis of bacterial sinusitis. One week later, the patient returns with worsening sore throat and a morbilliform rash, which covers the trunk, upper arms, and thighs. He has no known allergies to drugs, foods, or other environmental triggers. Examination reveals slightly tender, mobile anterior and posterior cervical lymphadenopathy, as well as bilateral tonsillar erythema and exudates, which were not present at the initial visit.



2. This young boy presents with a rash; the erythematous morbilliform exanthema has a discrete macular/papular soft-pink appearance. It manifested on the trunk and spread centrifugally to the extremities, neck, and face. The boy's mother reports that, four days ago, the child had a high fever (103°F) of abrupt onset and was extremely irritable. As the fever decreased, the rash started to appear.



Source: CDC/ Dr. John Noble, Jr.

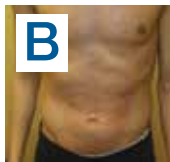
3. This 16-year-old presents with a painful, irregular ulceration on the lip lasting more than 2 weeks. It manifested as a tingling sensation followed a day later by small, fluid-filled blisters that coalesced before bursting and scabbing over. The history is notable for a week spent sailing in Caribbean.

4. A few days ago, this child developed a low-grade fever, upper respiratory tract symptoms, and fatigue. She presents with an extremely pruritic rash that developed rapidly on her chest, trunk, and scalp and then spread centrifugally to her arms and legs. Physical exam reveals additional areas of involvement: the mucosal areas of the conjunctiva, mouth, rectum, and vagina.



Source: CDC/ Dr. Herrmann

ANSWERS



Diagnosis: Heterophile antibody testing yields positive results, suggesting infection with **Epstein-Barr virus (EBV)**. EBV is a pervasive herpesvirus that infects approximately 95% of adults worldwide. More than

90% of adults are seropositive for EBV antibodies by the age of 30. Although affected individuals are often asymptomatic, some patients develop symptoms of **infectious mononucleosis (IM)**. An aminopenicillin rash can occur in patients with IM who are treated with amoxicillin or ampicillin, as was the case with this patient.

For more information, see “Man, 25, With Sinus Pain, Sore Throat, and Rash.” *Clinician Reviews*. 2018;28(8):25-28. <https://www.mdedge.com/clinicianreviews/article/171408/infectious-diseases/man-25-sinus-pain-sore-throat-and-rash>



Diagnosis: **Roseola infantum**, also known as *exanthema subitum* and *sixth disease*, is a common mild acute febrile illness of childhood caused by infection with **human herpesvirus (HHV) 6** (the primary agent causing roseola) or **7** (a secondary causal agent for roseola). HHV-6 has two variants (HHV-6a and HHV-6b). Roseola infantum is mostly associated with the HHV-6b variant, which predominantly affects children ages 6 to 36 months.

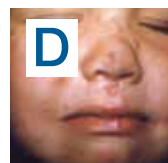
The virus replicates in the salivary glands and is shed through saliva, which is the route of transmission. After a 10- to 15-day incubation period, it remains latent in lymphocytes and monocytes, thus persisting in cells and tissues. It may reactivate late in life, particularly in immunosuppressed individuals. Reactivated infection in these patients may be associated with serious illness (eg, encephalitis/encephalopathy). In patients who have received a bone marrow transplant, it can induce graft versus host disease.

For more information, see “8 viral exanthems of childhood.” *J Fam Pract*. 2017;66(10):598-606. <https://www.mdedge.com/clinicianreviews/article/148038/pediatrics/8-viral-exanthems-childhood>



Diagnosis: **Primary herpes simplex virus 1 (HSV-1)** infection, also known as a cold sore, is generally subclinical, although some patients develop significant oral disease (called *primary herpetic gingivostomatitis*).

The incidence is highest in children, followed by adolescents and young adults. It's passed from person to person through direct contact. Most people naturally acquire HSV-1 by the age of 1 or 2 and carry the virus with them for the rest of their lives. For more information, see “Oral Lesions You Can't Afford to Miss.” *Clinician Reviews*. 2015;25(9):44-47,50-53,56. <https://www.mdedge.com/clinicianreviews/article/102334/oral-lesions-you-cant-afford-miss>



Diagnosis: **Varicella-zoster virus (VZV)** is a human neurotropic alphaherpesvirus that causes the primary infection commonly known as **chickenpox (varicella)**. This highly contagious virus is transmitted

by direct contact with the blisters, saliva, or mucus of an infected person. It is also transmitted through the air by coughing and sneezing. The disease is usually mild and resolves spontaneously; however, VZV establishes a lifelong presence in the sensory ganglionic neurons and, when reactivated later in life, causes herpes zoster (shingles), manifesting as a vesicular rash with a dermatomal distribution and acute neuritis.

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For more information, see “8 viral exanthems of childhood.” *J Fam Pract*. 2017;66(10):598-606. <https://www.mdedge.com/clinicianreviews/article/148038/pediatrics/8-viral-exanthems-childhood>

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Whitley RJ. Herpesviruses. In: Baron S, ed. *Medical Microbiology*. 4th ed. Galveston, Tx: University of Texas Medical Branch at Galveston; 1996. <https://www.ncbi.nlm.nih.gov/books/NBK8157/>. Accessed February 20, 2019.